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Department of Energy
Finding of No Significant Impact

Proposed CMR Building Upgrades
at the
Los Alamos National Laboratory
Los Alamos, New Mexico

U. S. Department of Energy
Los Alamos Area Office
528 35th Street
Los Alamos, NM 87544

DEPARTMENT OF ENERGY
FINDING OF NO SIGNIFICANT IMPACT

CMR BUILDING UPGRADES
LOS ALAMOS NATIONAL LABORATORY

FINAL ENVIRONMENTAL ASSESSMENT: The Department of Energy (DOE) - Los Alamos Area Office has prepared an Environmental Assessment (DOE/EA 1101) that analyzes the environmental impacts of constructing proposed upgrades to the Chemistry and Metallurgy Research (CMR) Building at Los Alamos National Laboratory (LANL). The purpose of this project is to enable the DOE to maintain the capability to continue to perform uninterrupted interim and ongoing radioactive chemical and metallurgical research activities in a safe, secure, and environmentally sound manner at LANL over the next 20 to 30 years. Related to this Environmental Assessment (EA) are programmatic National Environmental Policy Act (NEPA) documents recently completed or currently being prepared by DOE [CEQ, 40 CFR 1508.13]. The DOE's *Final Programmatic Environmental Impact Statement for Stockpile Stewardship and Management* (SS&M PEIS) (DOE/EIS-0236, September 1996; Record of Decision (ROD), December 19, 1996) looks at the present and reasonably foreseeable mission of the DOE Nuclear Weapons Complex, of which LANL is a part. The new LANL Sitewide Environmental Impact Statement (currently being written) will look at the current and reasonably foreseeable new operations at LANL, of which the CMR Building represents one of the main functional facilities.

The EA examined the potential environmental impacts of the proposed upgrades to the facility and associated activities and evaluated reasonable alternatives, including the no action alternative in accordance with the Council of Environmental Quality (CEQ) Regulations (40 CFR 1500-1508).

The proposed upgrades to the facility are composed of the following elements, each of which are described and evaluated in the attached EA on the pages referenced, including Appendix C of that document:

- seismic and tertiary confinement upgrades (Wings 3, 5, 7, 9 and Administration Wing) (pp. 17-18),
- security system upgrades (related to tertiary confinement) (p. 18),
- ventilation confinement zone separation modifications (Wings 3, 5, 7 and 9) (p.18),
- standby power/communications system upgrades (pp. 18-19),

- Wing 1 upgrades to the Heating, Ventilation and Air Conditioning (HVAC) system and associated Wing 1 interim decontamination (p.19),
- operations center upgrade (pp. 19-20),
- chilled water system upgrade: Wings 3, 5 and 7 (p. 20),
- main vault, Continuous Air Monitor (CAM) and damper upgrades (pp. 20-21),
- acid vent and drain upgrades: Wings 3, 5, and 7 (p. 21),
- fire protection upgrades (p. 21),
- upgrades to ensure operations center standby power (p. 21), and
- exhaust duct washdown recycling system upgrades to Wings 3, 5, and 7 (pp. 21-22).

Also considered and evaluated in this EA are proposed actions to place Wings 2 and 4 in a safe standby condition (p. 22).

Actions to carry out these facility upgrades and associated actions are scheduled to begin in Fiscal Year 1997 and are anticipated to be completed in about Fiscal Year 2002.

SUMMARY OF IMPACTS: The following is a summary of the impacts evaluated in the EA at the referenced pages presented in relation to the significance criteria described in 40 CFR 1508.27(b) Intensity [as refers to the severity of impact relating to the Issue of Significance].

1) *Impacts that may be both beneficial and adverse* [40 CFR 1508.27 (b) (1)]:

- The upgrades project is designed to improve the building in such a manner that, when completed, it is anticipated that the CMR Building can be used to meet current mission related activities in a safe, secure and environmentally sound manner for the next 20 to 30 years (pp. 1-3; Appendix C)
- There are no identified adverse impacts from upgrade construction activities associated with:
  - Air quality (p. 40);
  - Land use from waste disposal (pp.40 - 42);
  - Radioactive Liquid Waste Management (p. 42);
  - Transportation (p. 44).

2) *The degree to which the proposed action effects public health or safety* [40 CFR 1508.27 (b) (2)]:

- Public exposure from an increase in airborne radioactive material emissions is not anticipated to occur from the CMR Building due to upgrades taking place within the building; therefore, no radiological effects to the public are expected from the upgrades project (p. 42).
- The highest probability of a cancer fatality in the public resulting from a "worst case" accident scenario is well below the average background cancer mortality rate (pp. 42-49).
- Worker exposure during upgrade activities are within acceptable limits established by DOE (pp.42 - 44).

3) *Unique characteristics of the geographical area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas* [40 CFR 1508.27 (b)(3)]:

- No unique characteristics of the geographical area will be impacted by the project which is to take place either within or immediately adjacent to the CMR Building (p.29). Waste management and disposal of low level waste at Area G at LANL would take place in close proximity to land belonging to San Ildefonso Pueblo and to nearby Traditional Cultural Properties and cultural resource sites. However, the waste area itself would not disturb or directly affect these sites.

4) *The degree to which effects on the quality of the human environment are likely to become highly controversial* [40 CFR 1508.27 (b)(4)]:

- The project will result in negligible adverse effects on the quality of the human environment (pp. 39 - 49) since the major activities are located within the CMR Building or adjacent to it within already disturbed soils. Waste generated by the CMR Building upgrade activities will be disposed of in existing permitted landfills according to waste type, located either on-site or off-site (pp. 40-42). No new roadways, waste treatment facilities or disposal sites would need to be constructed solely due to waste generation resulting from the proposed upgrades. Human health risk from both activities associated with normal conditions during the upgrades and transportation, as well as from earth quake and transportation accidents were analyzed (pp. 42-49) and determined to be not be significant. Controversial issues surrounding the proposed upgrades to the CMR Building seem to stem from concern

over issues other than potentially significant effects on the quality of the human environment resulting from the projects' implementation (Appendix A).

5) *The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks* [40 CFR 1508.27 (b)(7)]:

- No unique, uncertain, or unknown risks to, or effects on, the human environment will result from the upgrades construction activities. Identified potential environmental effects from the upgrade construction actions and associated waste disposal activities are well defined. The proposed upgrades involve common construction activities in a controlled facility setting that involve a well characterized set of construction worker risks. Internal building upgrade activities will be carefully controlled to reduce radiological exposure to workers (pp. 15 and 22). Release of radioactive material from the building to the exterior environment and the public is not expected to occur under normal work conditions due both to the methods and restraints associated with the construction activities, and to the secondary confinement afforded by the building structure and its existing air filtration and interior area confinement systems. Disposal of wastes would occur at existing permitted waste disposal sites as appropriate according to identified waste types. The specific quantity of wastes by category of waste type that would require disposal is unknown; however this numerical uncertainty does not pose an effect on the environment that is highly uncertain, nor does it involve unique or unknown risks. An overestimation or "bounding" waste quantity is used to analyze potential environmental effects (pp. 40-42). Other identified potential environmental effects associated with the proposed upgrade activities are negligible: dust emissions during exterior construction; a small production of liquid radioactive waste; slightly increased health risk to workers and increased number of truck-miles driven during construction and waste disposal activities.

8) *The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration* [40 CFR 1508.27 (b) (6)]:

- DOE has no basis to conclude that the proposed upgrades to the facility would set a precedent for future actions that may have significant effects, nor does it believe that conducting these upgrades represents a decision in principle about future considerations. The project is intended to correct structural and building safety and security deficiencies that, when completed, will allow the facility to continue to be

used for the next 20 to 30 years to support current mission assignments that make use of the facilities unique inherent functional capabilities (pp.1-3).

7) *Whether the action is related to other actions with individually insignificant but cumulatively significant impacts* [40 CFR 1508.27 (b)(7)]:

- There are no significant cumulative impacts associated with conducting the upgrades project since they are designed to enhance the building infrastructure and allow it to continue to be used to support current program missions (pp. 26-27; pp. 39 - 49) and are not related to other known proposed actions for the building or general area. The collective upgrades are expected to be conducted over about a five year period. They are neither individually nor collectively related with other actions being performed in the building now or expected to be performed in the building during the anticipated construction period. The cumulative impacts of reasonably foreseeable related future mission assignments have been evaluated in the DOE SS&M PEIS, which analyzed the mission of the DOE Nuclear Weapons Complex, of which LANL is a part. The ROD selected several alternatives considered in that document for implementation at LANL, namely: construction of the ATLAS facility at Technical Area (TA) 35; transport of plutonium-242 material to LANL for storage at TA 55; and the reestablishment of pit fabrication capability at a small capacity level. The CMR Building is expected to play a future role in carrying out the work of the new pit production mission assignment and the NEPA analysis of activities involved in this activity will be included as part of the LANL Sitewide EIS currently in preparation. The Sitewide EIS will not only consider the potential effects of implementing the new assignments at LANL, but will also include the cumulative impacts associated with current and future operations at LANL, which will include the CMR Building conduct of operations. The CMR Building upgrades activities in themselves will neither influence nor be influenced by programmatic decisions stemming from either programmatic EIS. Individual projects that are already underway at the CMR Building or for which decisions have been made to conduct them in the CMR Building have been reviewed and found to be independent of the need, other than in a general sense, for the upgrade activities; they incorporate neither individually nor cumulatively significant impacts (pp. 26-27).

8) *The degree to which the action may adversely affect districts, sites, highways, structure, or objects listed in or eligible for listing in the National Register of Historic*

Places or may cause loss or destruction of significant scientific, cultural, or historical resources [40 CFR 1508.27(b)(8)]:

- No cultural resources are anticipated to be directly impacted by the proposed upgrade activities (p. 29). The CMR Building is not presently listed in or eligible for listing in the National Register of Historic places, nor do the upgrades project activities represent the loss or destruction of significant scientific, cultural, or historic resources because they will take place either within or immediately adjacent to the building in previously disturbed areas. No new treatment facilities or waste disposal sites will be constructed to meet the needs for disposal of waste generated by the proposed upgrade activities. There is no change in the existing environmental status quo of the LANL waste management and disposal site at Area G of Technical Area 54 anticipated from implementing the proposed action.

9) *The degree to which the action may adversely effect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973* [40 CFR 1508.27(b)(9)]:

- No threatened or endangered species or critical habitat protected under the Endangered Species Act of 1973 will be effected by the proposed upgrades activities (p. 29). Activities will either take place inside the CMR Building or within fenced areas immediately adjacent to the building in disturbed soils that offer very poor habitat for wildlife. On-site transportation of wastes will occur along existing roadways to the TA 54 waste management area at LANL. Off-site transportation of packaged wastes to existing treatment or landfill areas similarly will also occur along existing roadways.

10) Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment [40 CFR 1508.27 (b)(10)]:

- DOE is unaware of any Federal, State, or local law or requirements imposed for the protection of the environment that would be violated by the proposed facility upgrades or associated actions.

PREDECISIONAL DRAFT REVIEW & COMMENT: On August 27, 1996, DOE invited review and comment on a revised predecisional draft EA from the State of New Mexico and four American Indian Pueblos: Cochiti, Jemez, Santa Clara and San Ildefonso (i.e., four accord

pueblos). In addition, DOE made this revised predecisional draft EA available to Los Alamos County and the general public at the same time it was provided to the State of New Mexico and four accord pueblos by placing it in the DOE Public Reading Rooms in the Los Alamos National Laboratory Outreach Center and Reading Room in Los Alamos, and the TVI-Main Campus Library in Albuquerque. Also, local stakeholder groups were notified of the availability of the predecisional draft by letter on August 28, 1996. DOE had earlier sought review and comment on a draft of the EA on January 19, 1996. In response to the comments and concerns voiced by respondents, and because of a change in DOE's National Environmental Policy Act Implementing Proceduros that became effective on August 8, 1996, DOE decided to prepare a revised predecisional draft EA to include copies of the respondents letters with DOE responses. This was the document made available on August 27 to accord the State, the four Accord Pueblos, and other interested stakeholders with an additional review and comment period.

Comments were received from the Los Alamos Study Group; the Natural Resources Defense Council, Inc. together with The Los Alamos Study Group and the Concerned Citizens for Nuclear Safety; Mr. H.L. Daneman, and Dr. James T. Waber. These sets of comments were addressed in the Final EA, and individual responses to the comments were prepared by LAAO, and included in the EA; copies of the EA were sent to the respondents. Notification was received from the State of New Mexico that DOE responses to the State's comments on the January 1996 version of the predicisional draft EA were adequate and that the State did not intend to review the revised draft document.

FINDING: The Environmental Assessment for the Proposed CMR Building Upgrades identifies relevant issues of environmental concern, takes a "hard look" at potential environmental effects and is the basis for DOE concluding that the proposed actions will not have a significant effect on the human environment within the meaning of NEPA and the CEQ Regulations, 40 CFR Sections 1508.18 (Major Federal Action) and 1508.27 (Significance). Two potential upgrade designs regarding spacial arrangements are encompassed within the analysis provided by this Environmental Assessment: (1) upgrade the chemistry space in all three wings (3,5,7) with collocated office space as the wings are currently configured; or (2) upgrade the chemistry space and relocate the office space (and thus the workers) away from the laboratory space to improve worker safety. This second design actually increases operational laboratory space in each wing to the extent that the existing chemistry operations could be accommodated in just two wings and the third wing would then be put into a safe standby condition. If the second spacial design is selected

by the DOE, two analytical chemistry laboratory wings will be upgraded and the third wing will be placed into a safe standby condition. If space contained within the third analytical chemistry laboratory wing is considered for other programmatic needs, DOE will perform a separate National Environmental Policy Act analysis regarding those proposed new mission uses.

DOE makes this Finding of No Significant Impact pursuant to the National Environmental Policy Act of 1969 [42 U.S.C. 4321 et seq.], the Council on Environmental Quality (CEQ.) Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act [40 CFR 1500] and the DOE National Environmental Policy Act Implementing Procedures [10 CFR 1021]. Therefore, based on the EA that analyzes the potential environmental impacts that would be expected to occur if the DOE were to remodel and upgrade portions of the CMR Building, the proposed action does not constitute a major federal action that would significantly affect the human environment within the mandate of NEPA. Therefore, the DOE has concluded that no environmental impact statement is required for this proposal.

Signed in Los Alamos, New Mexico this 11th day of February, 1997.

G. Thomas Todd
Area Manager
Los Alamos Area Office